REMARKS/ARGUMENTS

This Amendment responds to the issues raised in the Official Action of March 10, 2005. An Amendment was filed on August 1, 2005 but was not entered as explained in the Advisory Action of August 5, 2005.

Reconsideration of this application is requested. Claims 18-24 and 27-30 and 33-54 are active in the application subsequent to entry of this Amendment. In the Amendment the claims have been redrafted and split into two embodiments – methods using a strongly basic substance (claims 18-24, 27-30 and 33-37) and methods using a basic amino acid (claims 38-54).

Claims 18 and 30 are amended to include the additional feature that "from 0 to less than 0.14 wt% of sodium bicarbonate" is added to the coffee in addition to a strongly basic substance. This feature is supported by claim 31 (now deleted) and the description in page 12, lines 19-24 of the specification.

In claims 28, 29, and 34, 35, the lower limit numbers have been changed. Basis for the new lower limits is discussed below.

The sole issue raised in the Official Action of March 10, 2005 is the prior art-based rejections of all but claims 25, 26, 32 and 33 based upon the disclosures of Sasagawa et al U.S. 6,056,989, a reference considered in the previous Official Action as well. In item 3 of the Official Action the examiner has indicated the allowability of claims 25, 26, 32 and 33; these claims have been deleted and their subject matter has been "moved" to a separate claim set.

Applicants have the understanding that the examiner has accepted the patentability of the invention of new claims 38-54 in which a basic amino acid is used. Thus, the comments that follow address the rejection against claims 18-37.

Applicants again emphasize the difference in the nature of the technical concepts between the present invention and Sasagawa et al.

The present invention addresses a problem related to the production of a "milk-added coffee beverage. As stated in page 1, line 24 - page 2, line 15 of the specification, the step of adding milk into coffee is critical in the production of milk-added coffee beverage. If the milk is added directly to coffee extract, the acidic pH of the coffee extract causes the milk to coagulate. The sterilization step is also critical, since milk-added coffee beverages tend to produce precipitation after heat sterilization. The specification states in page 5, lines 10-20 that the

inventors surprisingly found that sodium bicarbonate is the major cause of precipitation during the heat sterilization step for producing a "milk-added coffee beverage". The precipitation of coffee and milk occurs because of a slating-out reaction due to sodium bicarbonate which, according to the invention, is eliminated or limited to a trivial amount.

Therefore, according to the present invention, a strongly basic substance is used as a pH adjuster. As stated in the response to the previous official action, phosphates are disclaimed from the strongly basic substance used in the present invention. Further, it has been made clear in the amended claims that sodium bicarbonate is used not at all or only up to 0.14 wt% by the introduction of the feature from 0 to less than 0.14 wt% of sodium bicarbonate".

In distinct contrast, the problem to be solved in Sasagawa et al was the sliminess and bad after-taste of drinks which are found by them to be caused when sodium salts such as sodium bicarbonate, disodium hydrogenphosphate and the like are used for pH adjustment (column 1, lines 46-49). Thus, the two inventions addressed different problems. This difference will be clear also from the fact that the drinks of Sasagawa et al are not limited to coffee, let alone to milk-added coffee as in the present invention. Namely, various drinks such as milk, yoghurt, beer, whisky, and so on are listed in the last paragraph of column 3 of Sasagawa et al, and the invention is applied to black tea and Rokujo barley tea in Examples 5 and 6.

Furthermore, as the means for solving the problem, Sasagawa et al use potassium salts instead of sodium salts. Where coffee with milk is concerned, the general description of Sasagawa et al infers the use of a mixture of potassium salts (potassium carbonate, dipotassium hydrogenphosphate and potassium hydroxide) in column 4, lines 27-32. Further, if we carefully examine the working examples of Sasagawa et al, Examples 1 and 8 relate to coffee with milk, but no strongly basic substance is used. On the other hand, although Examples 2, 3, 4 and 7 use potassium phosphates, use of phosphates as a strongly basic substance has been disclaimed from the claims of the present application.

Thus, the two inventions are completely distinguishable. Hence, applicants do not believe that Sasagawa et al anticipates any of applicants' claims.

Since, Sasagawa et al do not even remotely suggest the problem of precipitation in the production of milk-added coffee beverage, the present invention is not obvious. Furthermore, as explained below, the present invention can be applied to prevent the product-ruining

precipitation when relatively greater amounts of coffee component and/or milk are contained in the beverage. This is not obvious from Sasagawa et al.

Applicants wish to emphasize the fact that the higher the concentration of coffee and/or milk, the more serious is the problem of precipitation.

In this respect, please refer to Tables 1 and 3 of the specification. Test Product 1 contains, in a total volume of 1,000 ml, the amount of coffee component extracted from 60 g of coffee beans and 120 ml of cow milk. Test Product 2 contains coffee component at an amount extracted from 75 g of coffee beans and 150 ml of cow milk.

In contrast, the amounts of coffee component and milk are significantly lower in Sasagawa et al; as can be seen in Examples 1, 2, 3, 4, 7 and 8, relating to milk-added coffee, 50 g of coffee beans and 100 g of cow milk are used to produce 1000 ml of coffee beverages. The examiner notes that the amounts of coffee component and milk component are calculated by Formulas I and II shown below, hence, the statements concerning the amounts of coffee and milk components of Sasagawa et al in page 2 of the official action are not accurate.

To bring the claims into agreement with the above arguments, the lower limits of coffee component and milk have been amended in claims 28, 29, and 34, 35. The lower limit of milk in claims 28 and 34 can be calculated as follows:

The extraction rate of coffee component from roasted coffee beans is about 18 %. See the attached translation page 66 of a Dictionary of Beverage Terminology. On the other hand, most cow milk contains solid component (i.e., milk component in claims 29 and 35) at 12.37%. See the translation of page 86.

In Test product 1 of the present application, 60 g of roasted coffee beans are used to extract coffee component, and 120 g of cow milk is added to produce 1000 ml (i.e., about 1,000g) of the product. Thus, the percentage amount of coffee component and milk component in Test product 1 is calculated by the formulas I and II:

Coffee component (60g x 0.18 / 1,000) x 100 1.08 % (I)

-- the lower limit in claims 28 and 34 is based on this value.

milk component (120g x 0.1237 / 1,000) x 100 — 1.48 % (II)

-- the lower limit in claims 29 and 35 is based on this value.

Similarly, the percentage amounts of coffee component and milk component in Test

product 2 of the present application and the coffee drink of Sasagawa et al are calculated as shown in the table below.

	Amount of Coffee Component	Amount of Milk Component
Sasagawa	50g/kg (0.9%)	100g/kg (1.24%)
Test Product I	60g/kg (1.08%)	120g/kg (1.48%)
Test Product 2	75g/kg (1.35%)	150g/kg (1.86%)

numerals in parentheses represent percentage amount on a dry substance basis

Tables 2 and 4 of the present specification show the unexpectedly low degree of precipitation of Test Products 1 and 2, whereas the degree of precipitation is higher in Control Product 1 (Table 2) which contains the same amounts of coffee component and cow milk as in Test Product 1 but does not contain any strongly basic substance.

In Control Product 2 which contains the same amounts of coffee component and cow milk as in Test Product 2 but does not contain any strongly basic substance, although precipitation was suppressed by the use of emulsifier the score of flavor evaluation was low (Table 4).

For the above reasons it is respectfully submitted that the claims of this application define inventive subject matter. Reconsideration and allowance are solicited. Should the examiner require further information or wish to discuss this application, please contact the undersigned.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____
Arthur R. Crawford
Reg. No. 25,327

ARC:eaw
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100